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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,260	10/21/2003	Scott L. Adriaansen	SP03-144	5452

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EXAMINER	
DANIELS, MATTHEW J	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,260	ADRIAANSEN ET AL.	
	Examiner	Art Unit	
	Matthew J. Daniels	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 May 2006 has been entered. In this response, Claims 1-19 were cancelled, and new Claims 20-25 were presented.

Claim Objections

2. Claim 20 objected to because of the following informalities: a period appears after "via" in line 12 of this claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 20-25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 20 is rejected for the phrase "correcting any misalignment" which makes it unclear and indefinite whether this step is a required step in the process. It is unclear whether the

phrase should be interpreted to be a) synonymous with "optionally, correcting misalignment" in which case the step would not be required, or b) a required step.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim rejections set forth previously under this section are withdrawn in view of the amended claims.

5. **Claims 20 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (USPN 5205991) in view of DeMasters (USPN 5431866), Loewy (USPN 2352442), and Kondo (USPN 4319840). **As to Claim 20**, Avery teaches extruding plasticized ceramic extrudate (Fig. 1, Item 13) and the following steps:

c) the step of cutting the extrudate to form the cut section of the extrudate (Fig. 1, Item 16)

d) the step of floatingly supporting the cut section of the extrudate on an air bearing (Fig. 1, Item 12)

f) the step of transferring the cut section of the extrudate laterally via frictional force to a dryer tray (frictional force is believed to be inherent in the carrier, Fig. 1, Item 20).

Avery appears to be silent to the other claimed limitations, namely:

a) applying the reference mark as it exits an extrusion die onto an extrudate support

b) correcting corkscrew deformation of the extrudate exiting the extrusion die in response to a reference mark misalignment, prior to cutting

e) taking an optical reading and subsequently correcting any misalignment after cutting

g) imaging the end of the cut section and comparing with a target range for alignment.

However, these aspects would have been prima facie obvious for the following reasons:

a) DeMasters applying a reference mark to extrudate as it exits the extrusion die (Fig. 3, Items 46, 48)

b) DeMasters teaches correcting the orientation of the section of the extrudate in response to a reference mark misalignment (2:59-3:37)

e) DeMasters clearly suggests to the ordinary artisan that an optical reading be used to determine misalignment and to correct any misalignment from a predetermined reference point (2:59-3:37). Although silent to correcting misalignment of the cut section, this step is also conventional for extruded shapes and is taught by Loewy (Figs. 3 and 4 and page 1, left column, lines 10-17).

g) Kondo teaches imaging an end of the cut section of the extrudate on a tray and comparing the image with a target range for alignment (1:58-68, the device inherently detects defective bodies, therefore a target range must have been predetermined in Kondo's method).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of DeMasters, Loewy, and Kondo into that of Avery in order to a) in order to provide a sensor means which acts to detect any rotation in the extrudate which might cause print printed on the pipe by the printing wheel to wander over the diameter of the pipe and correct for the rotation of the pipe (DeMasters, 4:15-19), b) correct for the frequent occurrence of twisting deformation due to uneven cooling or for other reasons (Loewy, left

column, lines 10-13), and to find defective bodies (Kondo, 1:68), which are inferior in performance and durability (1:30-31). **As to Claim 25**, Kondo teaches that it is conventional to inspect both ends of the extrudate (1:35-37), and that it would have therefore also been obvious to "image" both ends.

6. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (USPN 5205991), DeMasters (USPN 5431866), Loewy (USPN 2352442), and Kondo (USPN 4319840), and further in view of Nelson (USPN 4906170). Avery, DeMasters, Loewy, and Kondo teach the subject matter of Claim 20 under 35 USC 103(a) above. **As to Claim 21,** DeMasters' teaches a reference mark (Fig. 4, Items 46 and 48) and ink (3:38-45), but the cited references are silent to applying the reference mark with an inkjet. However, Nelson teaches applying an inkjet mark to the extrudate (3:38-55). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Nelson into that of Avery in order to provide a reference mark for orienting using a quick, easy, and cost effective method (Nelson, 1:66-2:2) that is also very accurate, non-contacting, and can be controlled by a computer (Nelson, 3:43-46).

7. **Claims 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (USPN 5205991), DeMasters (USPN 5431866), Loewy (USPN 2352442), and Kondo (USPN 4319840), and further in view of Sumino (USPN 5222594). Avery, DeMasters, Loewy, and Kondo teach the subject matter of Claim 20 under 35 USC 103(a) above. **As to Claim 22,** Avery and DeMasters teach countering corkscrew deformation in response to visual inspection of the

extrudate (see the rejection of Claim 8 and DeMasters, 3:11-37), but appear to be silent to the particular apparatus used in the claimed method. However, Sumino teaches correcting corkscrew deformation of a tubular form by contacting a surface of the tube with rollers having pivot axes aligned askew from a tube axis of movement (See Figs. 17 and 18, 2:48-52, and 2:57-3:2) along the tube support in a skew direction causing tube rotation counter to the corkscrew deformation in response to inspection (See Figs. 5-18, and in particular Figs. 14, Item 70, and Figs. 17 and 18). While Sumino and the other cited references appear to be silent to an "elastically deformable roller," the Examiner submits that every material, including brittle ceramics, are capable of undergoing some amount of elastic deformation. In the alternative, the Examiner additionally asserts that silicone and rubber rollers are conventional in the art. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Sumino into that of Avery in order to provide twist correction for pipe through an increase in twisting forces produced by using plural correcting rollers (2:31-38), which Sumino provides (2:46-3:2 and Fig. 8, for example). **As to Claim 23,** Sumino provides contacting a surface of the extrudate with a pivotally supported elastically deformable roller having a pivot axis oriented out of perpendicular alignment with the centroid axis of the cut section of extrudate. The Examiner's position is that it would be obvious to the ordinary artisan to orient the cut section of the extrudate in the same way that the continuous extrudate was oriented. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Sumino into that of Avery in order to provide twist correction for pipe through an increase in twisting forces produced by using plural correcting rollers (2:31-38), which Sumino provides (2:46-3:2 and Fig. 8, for example).

8. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (USPN 5205991), DeMasters (USPN 5431866), Loewy (USPN 2352442), and Kondo (USPN 4319840), and further in view of Takeuchi (USPN 5591387). Avery, DeMasters, Loewy, and Kondo teach the subject matter of Claim 20 under 35 USC 103(a) above. **As to Claim 24**, Avery appears to be silent to the pad supports constructed of a flexibly resilient foam. However, Takeuchi teaches that it is known to provide a supporting pad constructed of a flexibly resilient force (3:1-15). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Takeuchi into that of Avery in order to provide close adherence of the support to the green body (3:10-12), which would obviously reduce sagging and deformation.

Response to Arguments

9. Applicant's arguments filed 14 November 2005 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) Avery fails to suggest detecting and correcting for extrudate misalignment at any stage.

b) There is no suggestion in DeMasters to realign cut sections of pipe

c) Sumino is non-analogous

10. These arguments are not persuasive for the following reasons:

a) Acknowledgement of the problem and motivation for the combination is provided in the other references of record. Notably, the references cited above teach or suggest the conventionality of

reorienting extruded sections either in a continuous manner or as a batch process performed on a single extruded article.

b) A secondary reference teaches this new aspect

c) The Examiner maintains his position that Sumino is analogous as being drawn to transporting a tubular or pipe-like section.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 7/20/06

MJD

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7/20/06